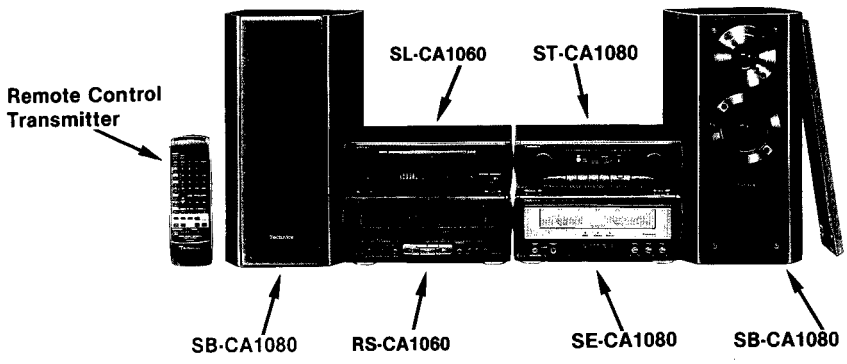
ORDER NO. AD9406158C2

Service Manual

Stereo Amplifier

Amplifier

SE-CA1080



Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EG)	Germany and Italy.	

System: SC-CA1080

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

■ SPECIFICATIONS

■ STEREO AMPLIFIER

Power output	
DIN 1 kHz, THD 1%, both channel driven	2 × 60 W (6 Ω)
Total harmonic distortion	
Rated power at 1 kHz	0.9% (6 Ω)
Half power at 1 kHz	0.009% (6 Ω)
Load impedance	
MAIN	6 – 8 Ω
SURROUND	4 – 8 Ω
CENTER	8 Ω
S/N (rated power)	
MAIN	90 dB
Tone	
BASS	80 Hz (±6 dB)
TREBLE	20 kHz (±6 dB)
V.BASS	60 Hz (0 – 8 dB)

■ General

Power consumption	198 W
Power supply	
[For (E, EG) areas.]	230 V, AC 50/60 Hz
[For (EB) area.]	230 – 240 V, AC 50/60 Hz
Dimensions (W × H × D)	280 × 1185 × 331.5 mm
Weight	5.9 kg

Notes:

1. Design and specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortions is measured by the digital spectrum analyzer.

System	Stereo Tuner	Compact Disc Player	Stereo Amplifier	Cassette Deck	Speakers
SC-CA1080	ST-CA1080	SL-CA1060	**SE-CA1080**	RS-CA1060	*SB-CA1080

*Made in PAES

Technics®

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Note: Refer to the Installation and Connections and Concerning the remote control and Quick referenc of remote control operations of Service manual for Model No. ST-CA1080 (E, EG), Order No. AD9406153C2.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

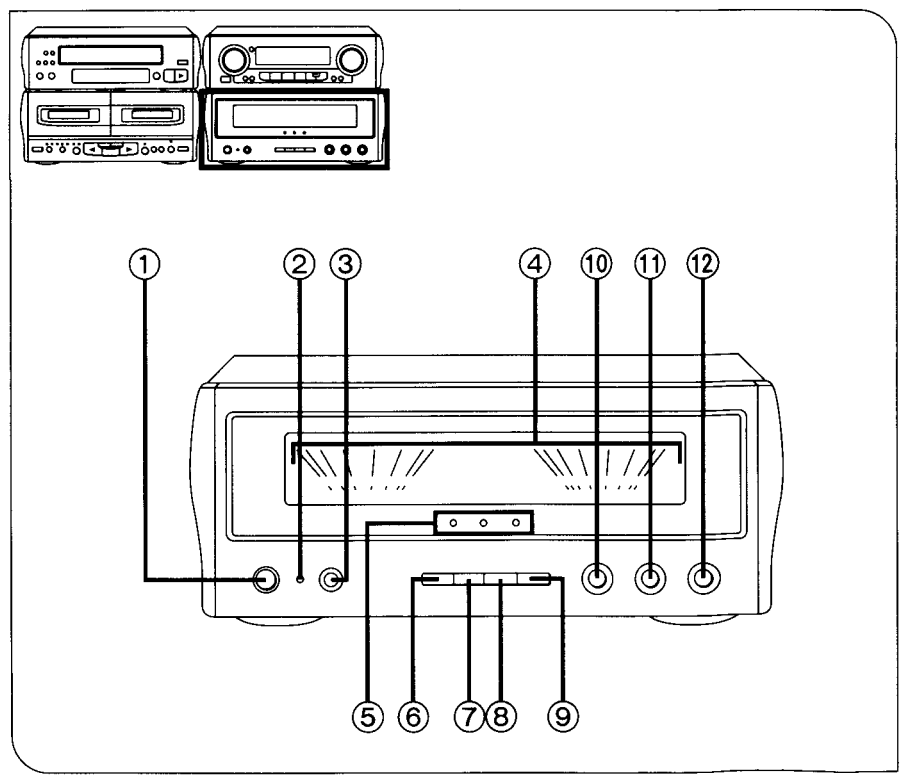
■ BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C701 and C702 through a 10Ω, 5W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdrive blade, for instance), as this may distroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230V/240VV/110−127V/220−240V.

Power supply voltage	AC 230V		AC 240V	
Consumed current 50/60Hz	50Hz	110~250mA	50Hz	100~240mA
	60Hz	88~200mA	60Hz	80~192mA

■ LOCATION OF CONTROLS

Stereo amplifier section



① **Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② **Standby indicator (STANDBY)**
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

③ **Headphones jack**

④ **Output power meters**

⑤ **Dolby Pro-Logic center mode indicators**

⑥ **Dolby Pro-Logic OFF/ON button**

⑦ **Dolby Pro-Logic center mode select button**

⑧ **Delay time adjustment button**

⑨ **Test signal transmission button**

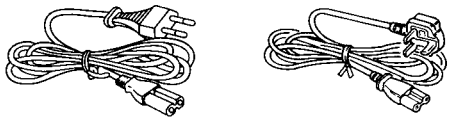
⑩ **S. BASS control**

⑪ **BASS control**

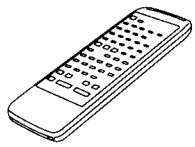
⑫ **TREBLE control**

■ ACCESSORIES

AC power supply cord ..... 1 pc.
[RJA0019-2A (E, EG)] [VJA0733 (EB)]



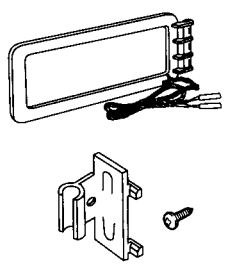
Remote control transmitter..... 1 pc.
(RAK-CH729WH)



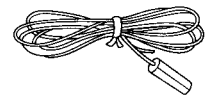
Flat cable (long)..... 1 pc.
(REX0511)

Flat cable (short)..... 1 pc.
(REX0608)

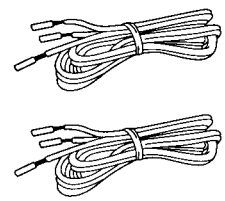
AM loop antenna (RSA0012)..... 1 pc.
• Antenna holder (RMN0244)..... 1 pc.
• Screw (XTN3+12AFZ) ..... 1 pc.



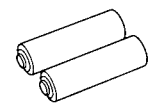
FM indoor antenna ..... 1 pc.
(RSA0007)



Speaker cords ..... 2 pcs.
(REE0393)

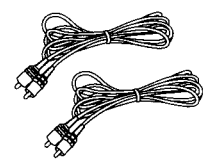


Batteries for remote control transmitter ..... 2 pcs.
(UM-4, "AAA", R03)

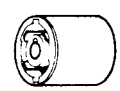


Note: There are available on sale route.

Surround speaker cords ..... 2 pcs.
(RJL1P005B99)



Attachment plug ..... 1 pc.
[SJP9009 (EB)]



■ OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

NOTE

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Illustrated screws are equivalent to actual size.
5. Refer the parts No. on the page of "Main component Replacement Procedures", if necessary.

• Contents

•Checking Procedure for each P.C.B. page.

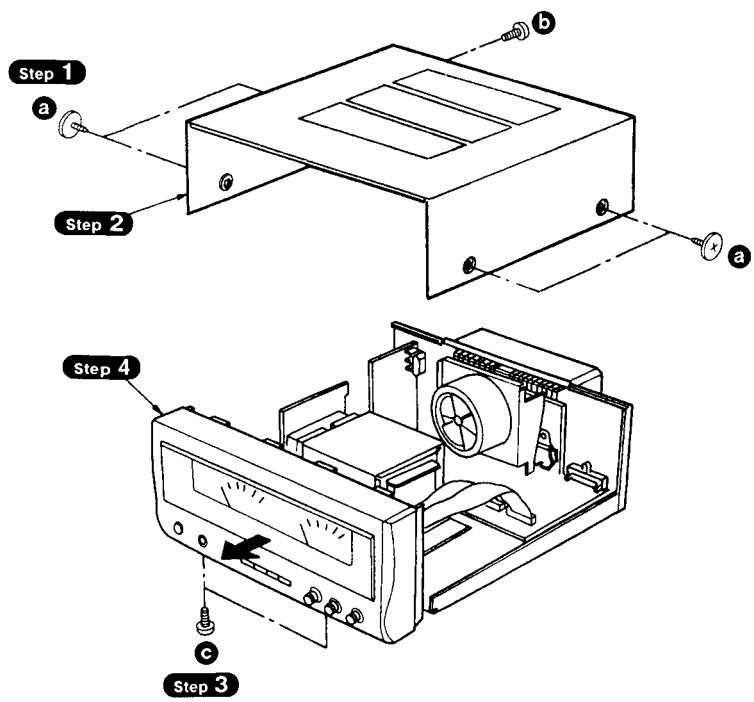
1. Checking for the operation P.C.B. 4
2. Checking for the main P.C.B. 5

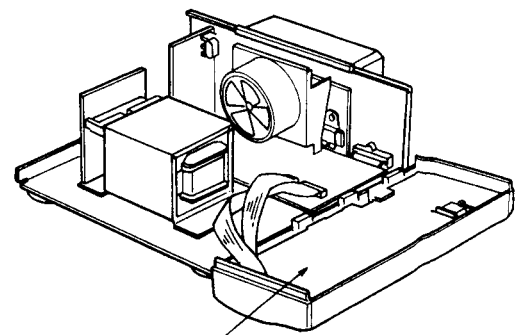
•Main Component Replacement Procedures

1. Replacement for the power IC and regulator transistor 5

■ Checking Procedure for each P.C.B.

1. Checking for the operation P.C.B.



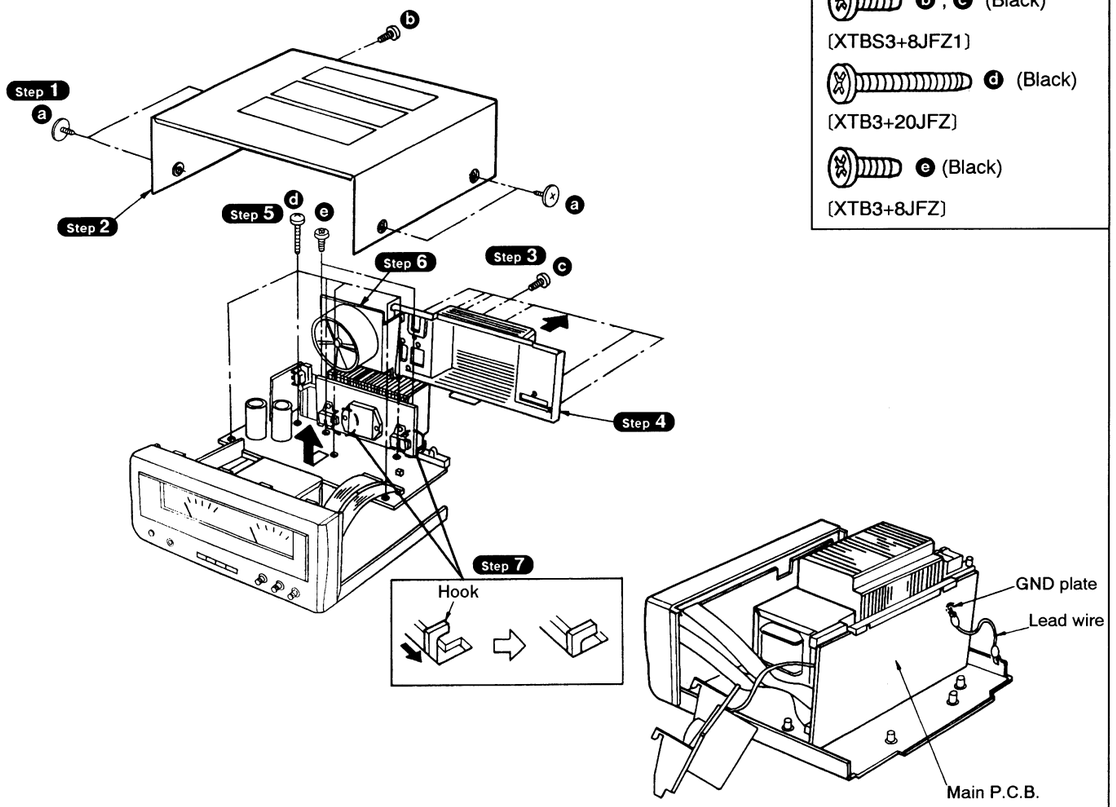


Operation P.C.B.

a (Black)
[RHD30007]

b, c (Black)
[XTBS3+8JFZ1]

2. Checking for the main P.C.B.



a (Black)
{RHD30007}

b , c (Black)
{XTBS3+8JFZ1}

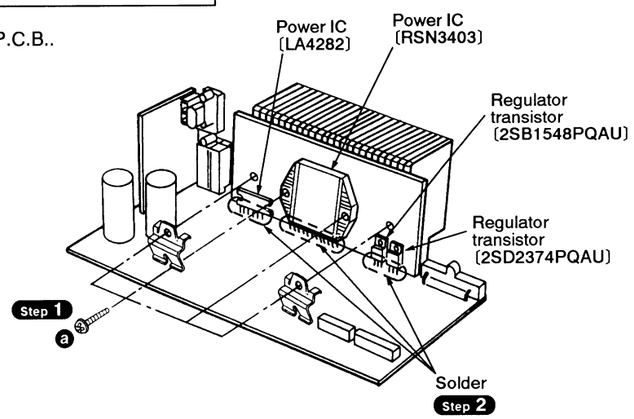
d (Black)
{XTB3+20JFZ}

e (Black)
{XTB3+8JFZ}

■ Main Component Replacement Procedures

1. Replacement for the power IC and regulator transistor

•Follow the item 2 in checking procedure for each P.C.B..



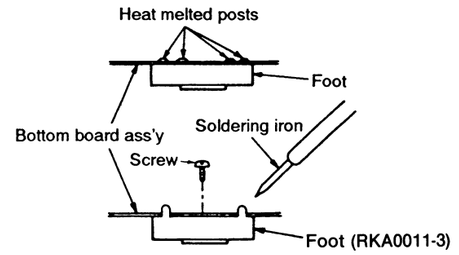
NOTE

When mounting the power IC or regulator transistor, apply silicone compound (RFKX0002) to the rear side of power IC or regulator transistors.

a
{XTW3+15T}

■ REPLACEMENT OF THE FOOT

1. Remove the 4 heat melted posts on the Bottom board ass'y with a pair of nippers or similar tool.
2. To replace the foot (RKA0011-3) on the Bottom board ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).



■ POWER SOURCE ON/OFF OF THIS UNIT SE-CA1080

1. Connect the AC power cord of this unit to an AC outlet and turn it on. (This unit comes to stand-by mode.)
2. Make test point TP701 (TP701) short as shown in Fig. 1. POWER indicator lights and this unit comes to power ON mode.

• Operation Check

1. Set this unit to power ON mode.
2. Input a signal (1 kHz, 100 mV) to the section between the resistor R833 (LINE IN for Lch) and the capacitor (C906) (LINE IN GND) as well as the section between the resistor R834 (LINE IN for Rch) and the capacitor (C906) (LINE IN GND).
3. Connect the speaker to the speaker terminals and check if it sounds from the speaker.

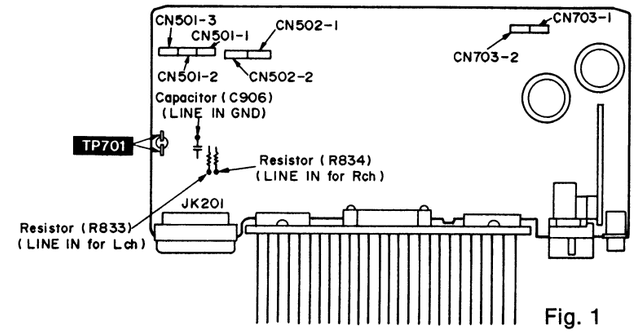


Fig. 1

■ MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- S. BASS knob..... Minimum
- BASS, TREBLE knob..... Center
- AF Oscillator
- AC electronic voltmeter (EVM)

• POWER METER ADJUSTMENT

1. Connect an AF oscillator and AC to the amplifier, as shown in Fig. 1.
2. Set the power meter input level to 0 and confirm the meters on both amplifiers, L-ch and R-ch, show −60dB.
3. Turn on power to the unit and apply a 1kHz, 88mV signal from pin 11 (GND) to pin 13 (R-ch) and pin 14 (L-ch) of JK201. With this input level applied, check the AC EVM monitors are within the range of ±5mV.
4. Adjust **VR808** (R-ch) and **VR809** (L-ch) so that the power meter indicates **1W**.
5. Increase the input level by 10dB and confirm that the power meter indicates **10W (±1W)**.
6. Set the input level back to 0 and check the meter indicators do not return to −60dB too quickly or unevenly.

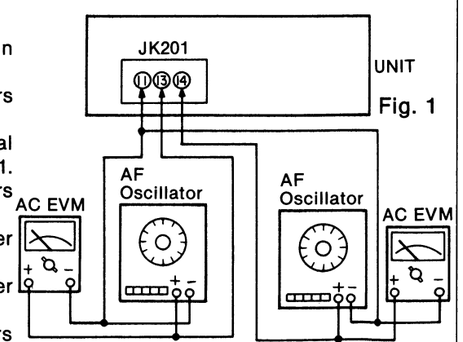


Fig. 1

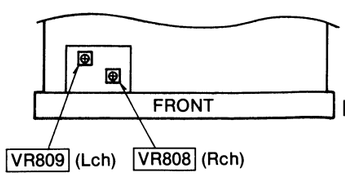


Fig. 2

■ SCHEMATIC DIAGRAM

(Parts list of pages 17～20.)

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- **S801** : Power "STANDBY ⏻ /ON" switch. (POWER, STANDBY ⏻ /ON)
- **S802** : Dolby Pro-Logic OFF/ON switch.
- **S803** : Dolby Pro-Logic center mode select switch.
- **S804** : Delay time adjustment switch.
- **S805** : Test signal transmission switch.
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
  No mark: Power ON
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

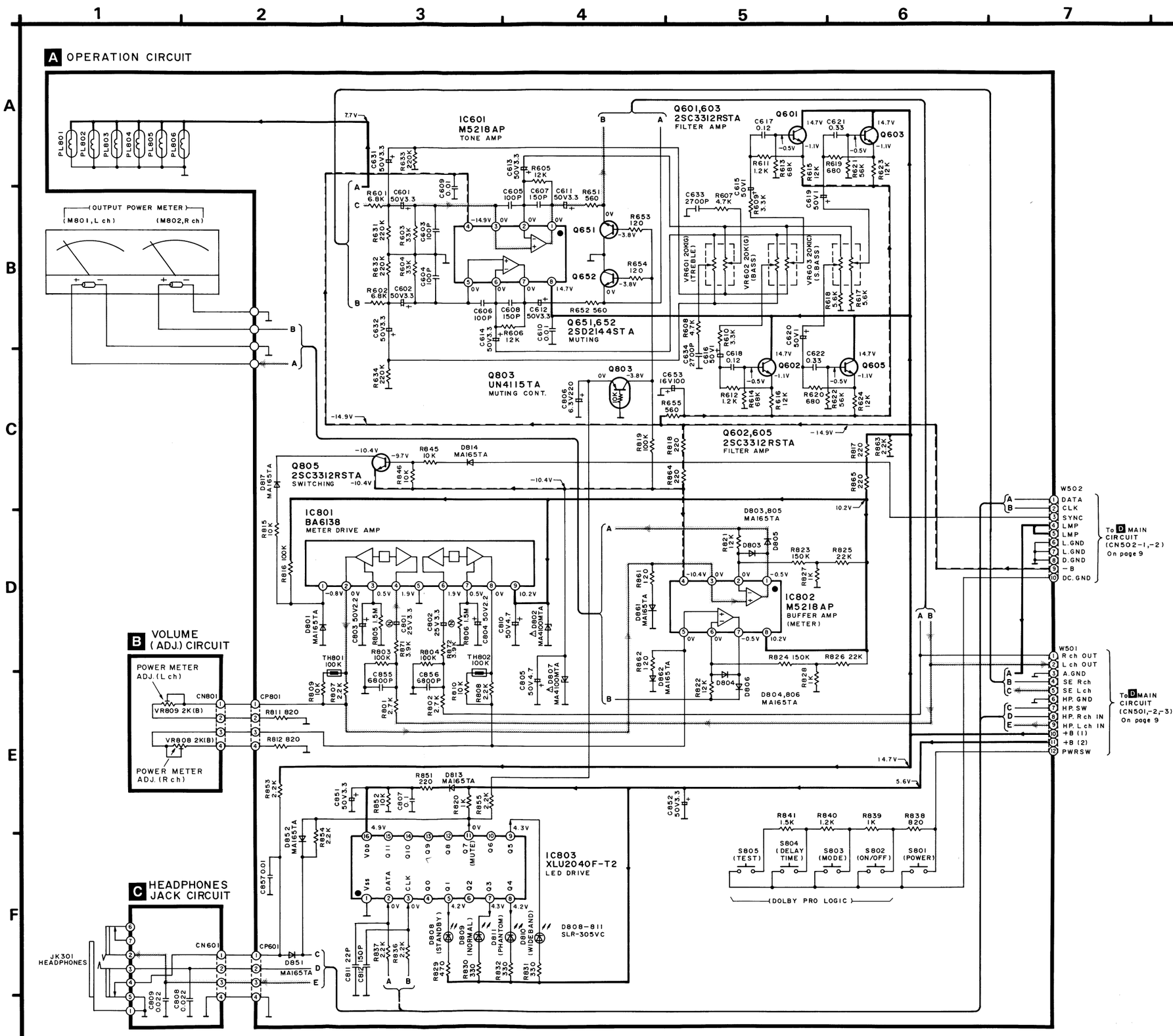
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
  Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

- **Voltage and signal line**

  ▬▬▬ : Positive voltage line
  ▬ ▬ ▬ : Negative voltage line
  ▒▒▒ : Source signal line
  ⇨ : Surround speaker drive signal line
  ⇨ : Center speaker drive signal line

- The supply part number is described alone in the replacement parts list.

Part No.	Production Part No.	Supply Part No.
IC803	XLU2040F-T2	XLU2040F-T1

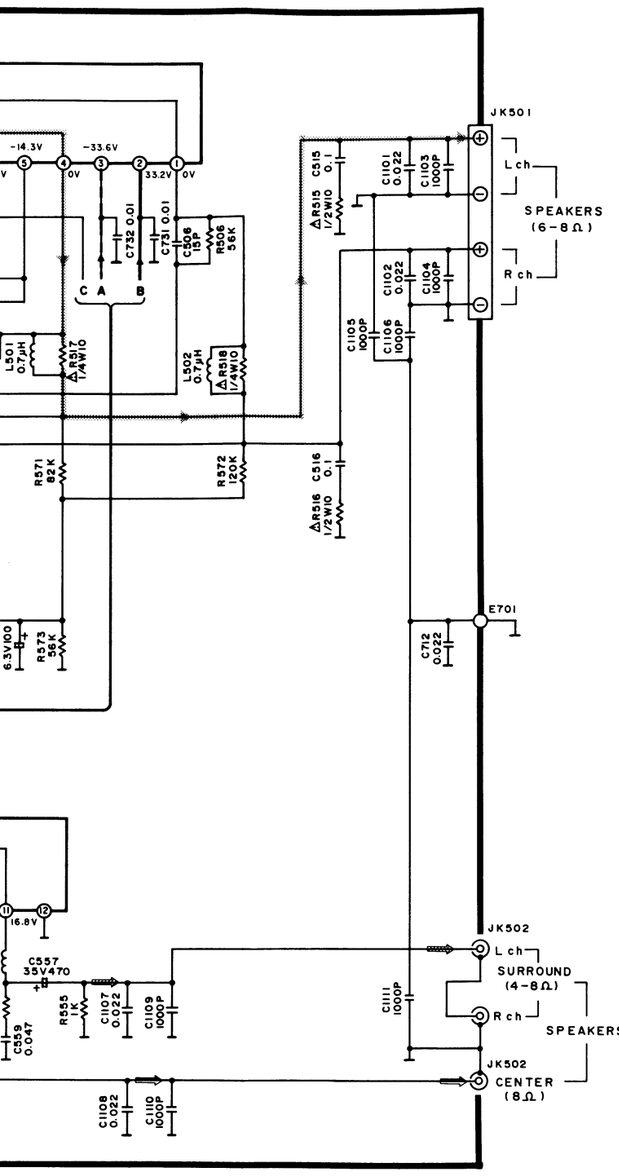


D MAIN CIRCUIT (H.PHONES AMP/POWER AMP/MUTING/REGULATOR/FAN MOTOR DRIVE)

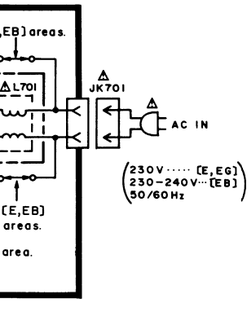
JK351
FAN MOTOR
Q371 2SC3311AIRTA MOTOR DRIVE
ΔQ361 KSD471ACYGTA MOTOR DRIVE
ΔQ362 2SC3327ABTP MOTOR DRIVE
ΔQ352 KSD471ACYGTA MOTOR DRIVE
Q351,353 2SC3311AIRTA SIGNAL LEVEL DET.
IC301 M5218AP HEADPHONES AMP
Q203 UN4115TA MUTING CONT.
Q201 2SD1450STA MUTING
Q202 2SD1450STA MUTING
ΔIC501 RSN3403 POWER AMP
Q573 2SA1309AIQTA OVER LOAD DET.
Q501 2SA992EFTA SWITCHING
Q354 2SC3311AIRTA OVER LOAD DET.
Q571,572 2SC3311AIRTA PROTETOR
ΔQ702 2SB1548PQAU REGULATOR
ΔQ701 2SD2374PQAU REGULATOR
ΔQ703 2SC3940AQSTA REGULATOR
Q704 2SC3112TA RELAY DRIVE
Q753 UN4111TA POWER SUPPLY CONT.
ΔQ751,752,754,755 2SC3940ASTA REGULATOR
IC551 LA4282 POWER AMP (SURROUND/CENTER)
Q555 UN4115TA MUTING CONT.
Q553,554 2SD1450STA MUTING
Q551 2SC3311AIRTA SWITCHING
SURROUND SPEAKER DRIVE SIGNAL
CENTER SPEAKER DRIVE SIGNAL
SOURCE SIGNAL (L ch)
To A OPERATION CIRCUIT (W502) On page 8
To A OPERATION CIRCUIT(W501) On page 8
To ST-CA1080 :JK602 On page 24
SHORT: POWER "ON"

E POWER TRANSFORMER CIRCUIT

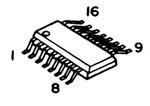
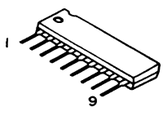
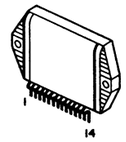
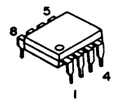
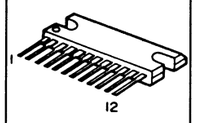
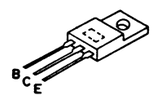
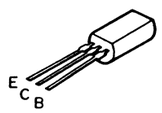
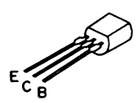
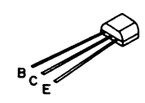
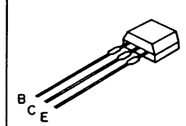
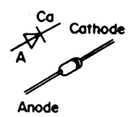
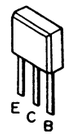
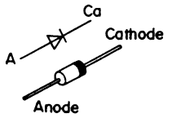
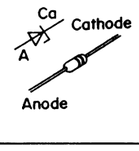
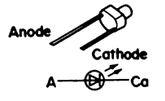
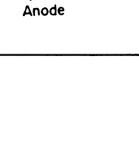
F AC IN TERMINAL CIRCUIT



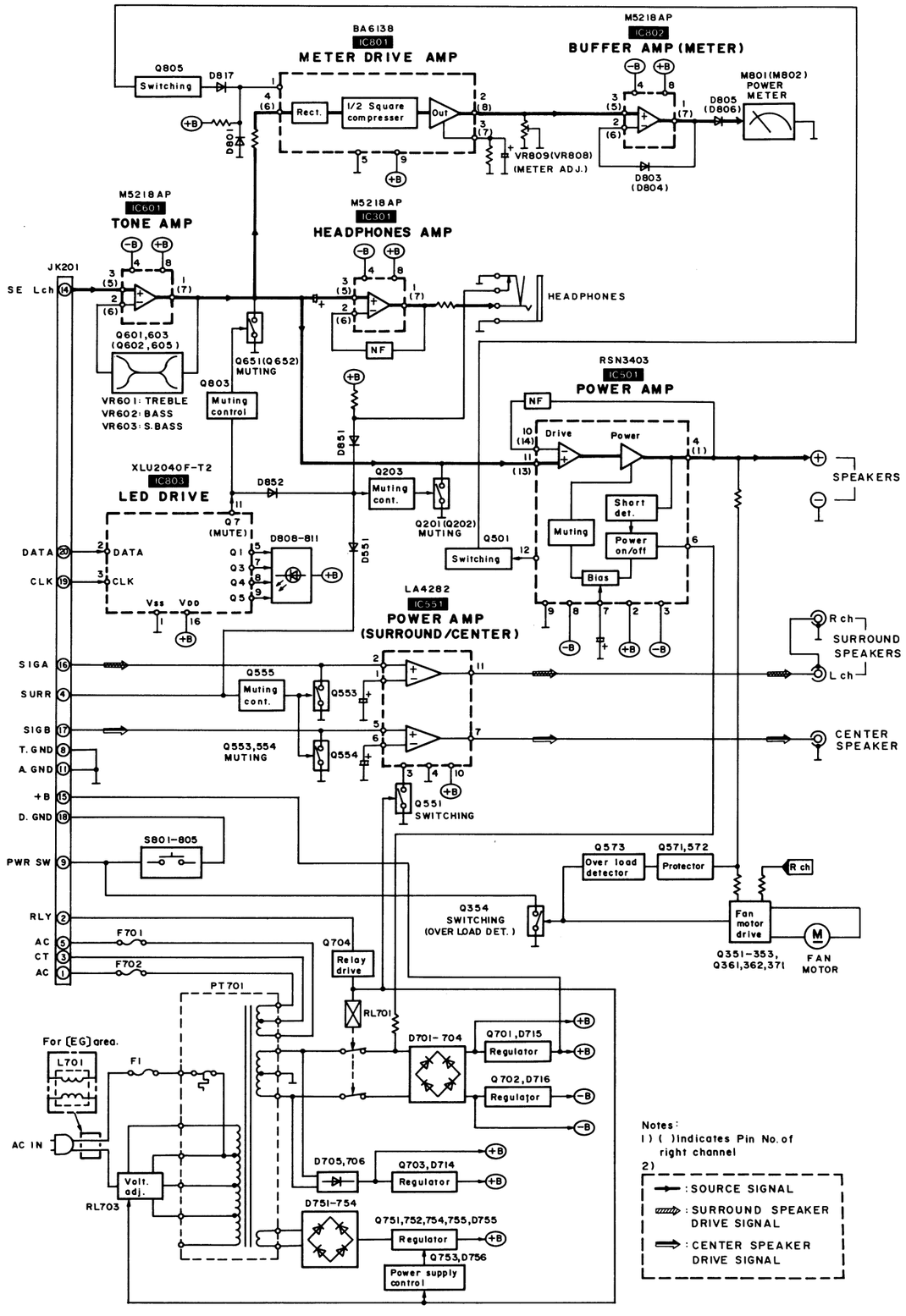
TERMINAL CIRCUIT



• **Terminal guide of IC's, transistors and diodes**

XLU2040F-T2 	BA6138 	RSN3403 
M5218AP 	LA4282 	2SB1548PQAU 2SD2374PQAU 
2SC3940AQSTA 2SC3940ASTA 		KSD471ACYGTA 2SA992EFTA 2SC3112TA 2SC3312RSTA
2SC3327ABTP 	2SD2144STA 	MA165TA 
	UN4111TA UN4115TA 2SA1309AIQTA 2SC3311AIRTA 2SD1450STA	1N5402BF RL1N4003N02 
	MA4100MTA MA4150HTA MA4240MTA	SLR-305VC 
	MA4062HTA MA4068MTA MA4082LTA MA4091MTA	

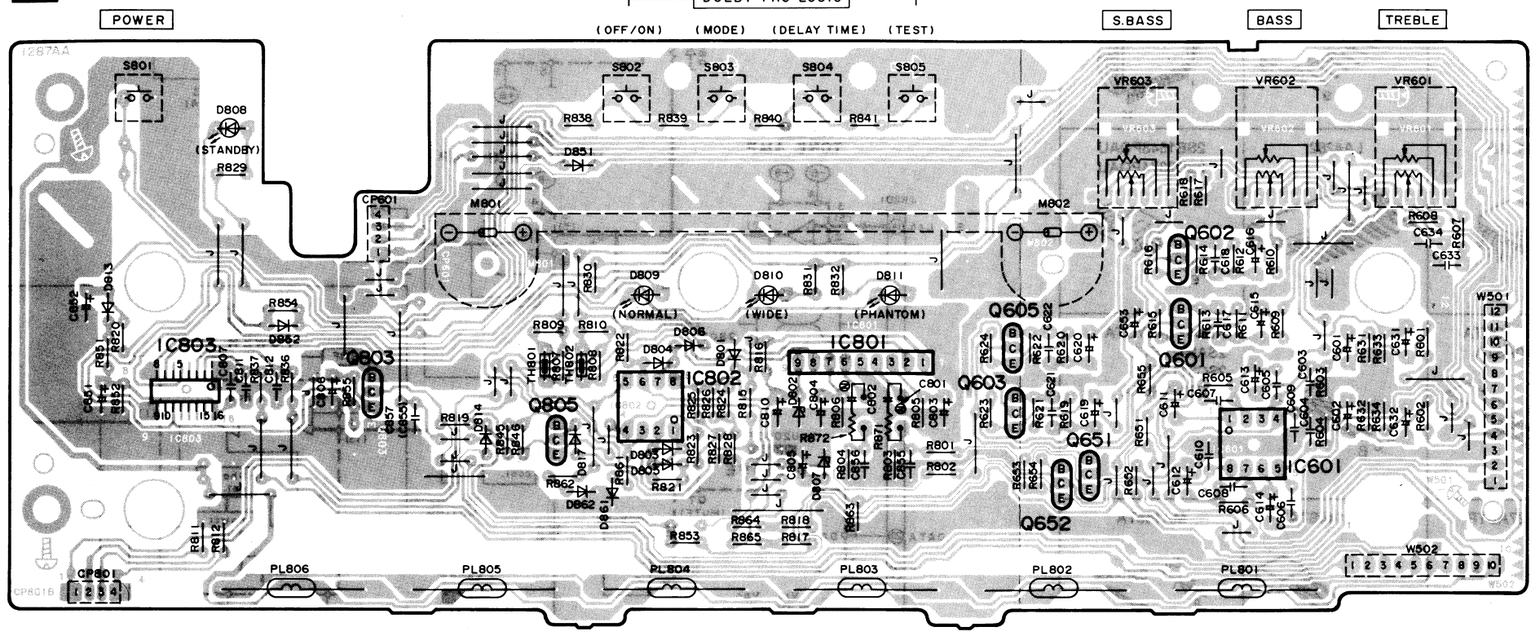
■ BLOCK DIAGRAM



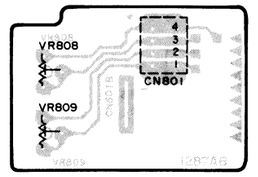
Notes:
1) ( ) Indicates Pin No. of right channel
2)
→ : SOURCE SIGNAL
⇉ : SURROUND SPEAKER DRIVE SIGNAL
⇒ : CENTER SPEAKER DRIVE SIGNAL

■PRINTED CIRCUIT BOARDS

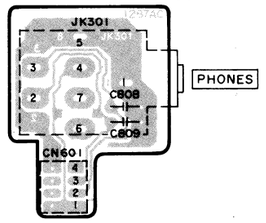
A OPERATION P.C.B. (REPI924B-S)



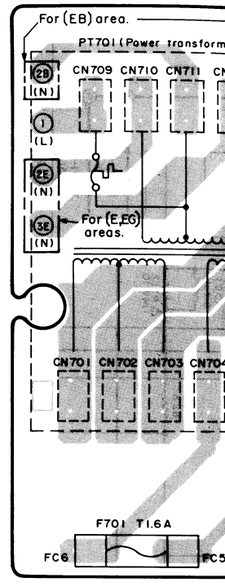
B VOLUME (ADJ.) P.C.B. (REPI924B-S)



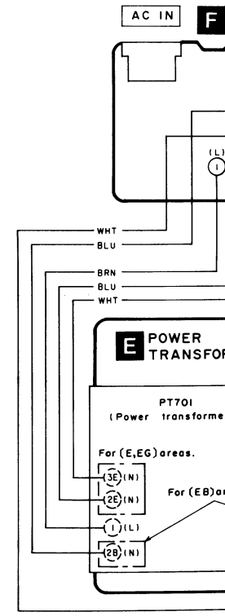
C HEADPHONES JACK P.C.B. (REPI924B-S)



E POWER TRANSFORMER

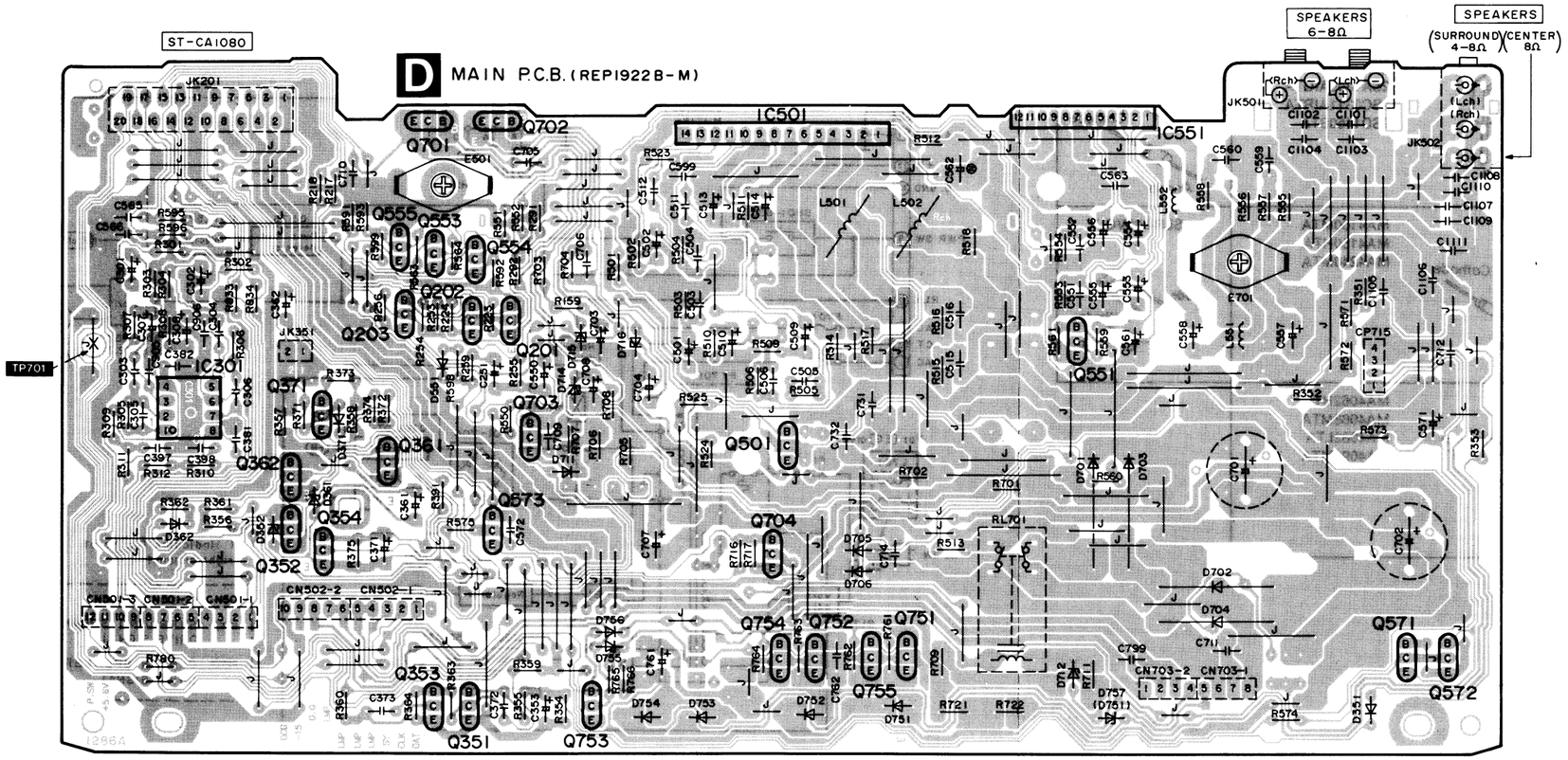


■WIRING CON



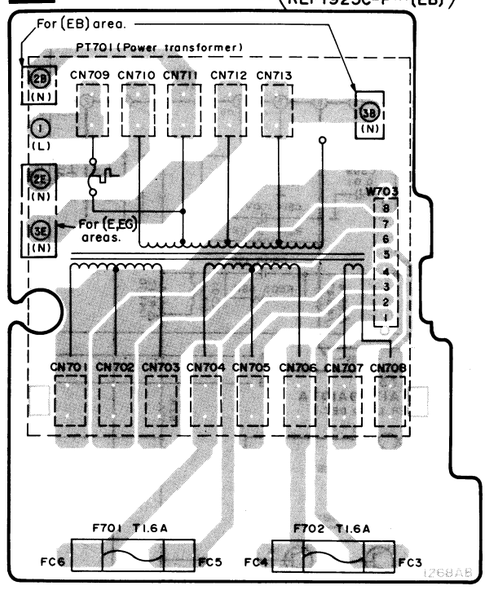
NOTE:
BLU···Blue
BRN···Brown
WHT···White
GRY···Gray

D MAIN P.C.B. (REPI922B-M)

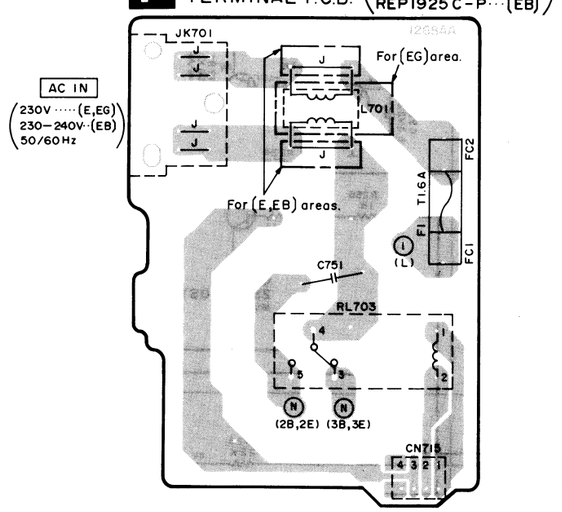


10 11 12 13 14

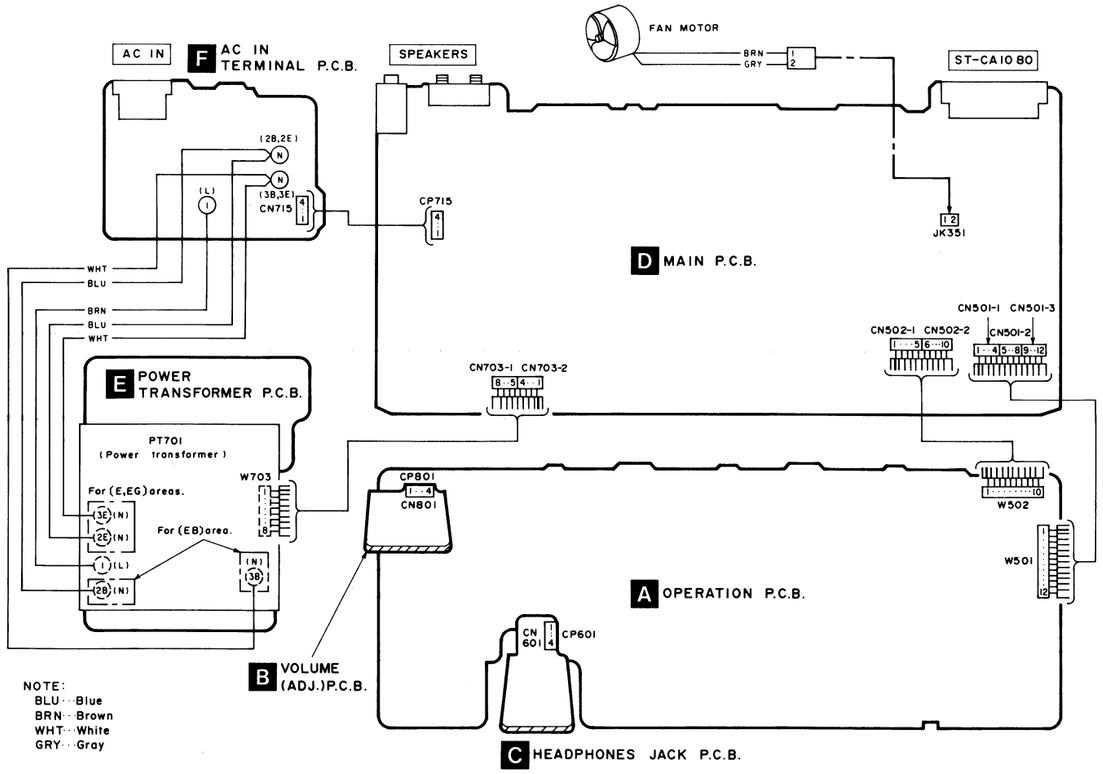
E POWER TRANSFORMER P.C.B. (REP1925A-P···(E) REP1925B-P···(EG) REP1925C-P···(EB))



F AC IN TERMINAL P.C.B. (REP1925A-P···(E) REP1925B-P···(EG) REP1925C-P···(EB))



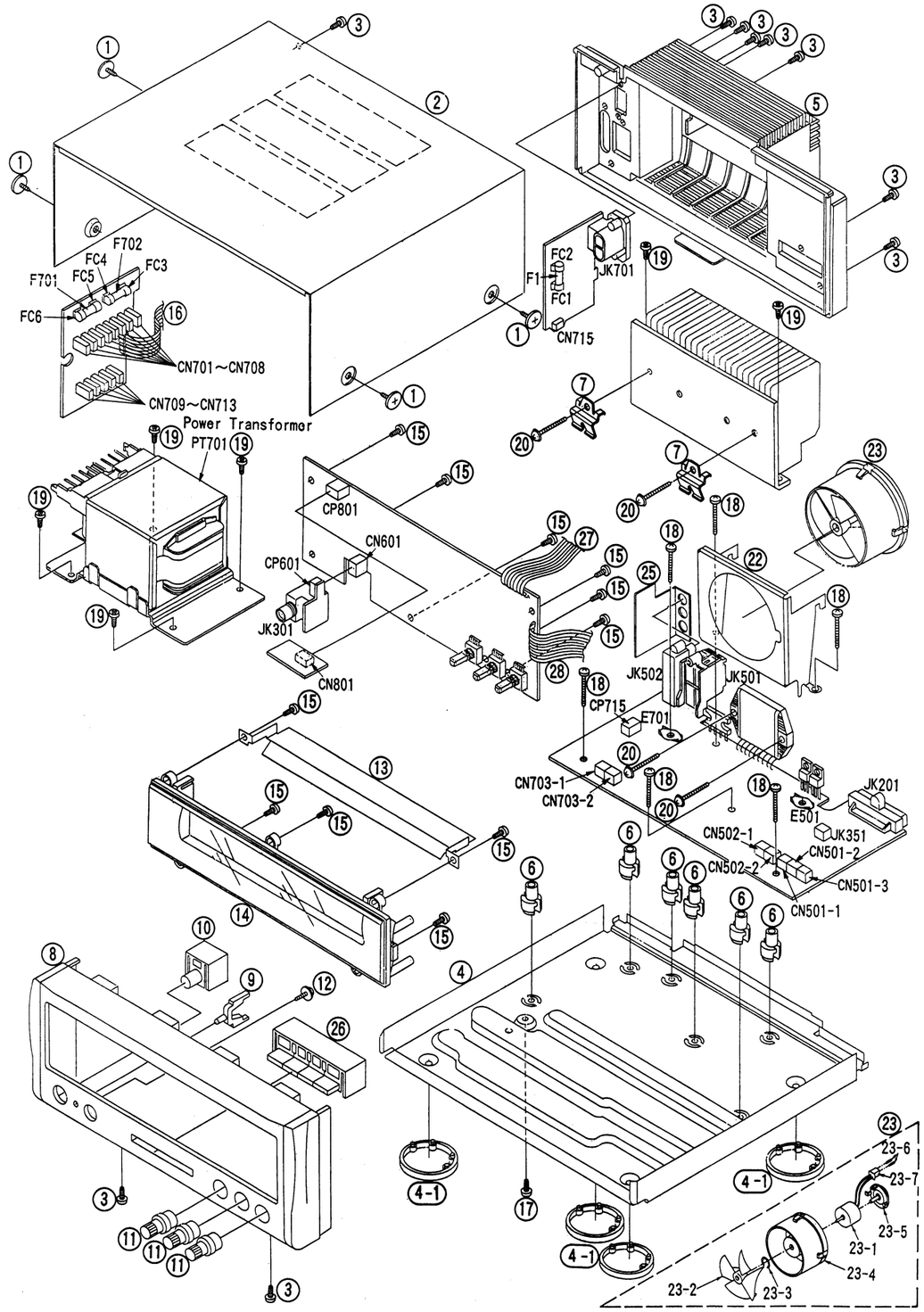
■ WIRING CONNECTION DIAGRAM



1 2 3 4 5

A B C D E F

■ CABINET PARTS LOCATION



■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS LIST	
1	RHD30007	SCREW	
2	RKM0202A-2K	CABINET	
3	XTBS3+8JFZ1	SCREW	
4	RFKJE1060EK	BOTTOM BOARD ASS'Y	
4-1	RKA0011-3	FOOT	
5	RFKHE1080EK	REAR GRILL ASS'Y	(E)
5	RFKHE1080EBK	REAR GRILL ASS'Y	(EB)
5	RFKHE1080EGK	REAR GRILL ASS'Y	(EG)
6	RKQ0089	P. C. B. SPACER	
7	RMC0158	TRANSISTOR HOLDER	
8	RFKGECA1080E	FRONT PANEL ASS'Y	
9	RGL0230-Q	READING LIGHT PANEL	
10	RGU1062-S	BUTTON, POWER	
11	RGW0205-S	S. BASS, BASS, TREBLE KNOB	
12	RHD26016	SCREW	
13	RMV0072	CONDUCTION PLATE	
14	RSE0005A	METER UNIT	
15	XTBS26+8J	SCREW	
16	RWJ1808150XX	FLAT CABLE (W703) (8P)	
17	XTB3+10JFZ	SCREW	
18	XTB3+20JFZ	SCREW	
19	XTB3+8JFZ	SCREW	
20	XTW3+15T	SCREW	
22	RMN0282	FAN ANGLE	
23	SYE1128-2	FAN ASS'Y	
23-1	MDN-4RB4MRC	MOTOR	
23-2	SHE232	FAN	
23-3	SUS271	SPRING	
23-4	SHE233	FAN CASE	
23-5	SHE234	CAP	
23-6	SJT783	TERMINAL	
23-7	SJS5215	SOCKET (2P)	
25	RMV0078	CONDUCTION PLATE	⚠
26	RGU1063-K	BUTTON, PRO LOGIC	
27	RWJ1810220QC	FLAT CABLE (W502) (10P)	
28	RWJ1812210QC	FLAT CABLE (W501) (12P)	

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC301	M5218AP	HEADPHONE AMP	
IC501	RSN3403	POWER AMP	⚠
IC551	LA4282	POWER AMP	
IC601	M5218AP	TONE AMP	
IC801	BA6138	METER DRIVE AMP	
IC802	M5218AP	BUFFER AMP	
IC803	XLU2040F-T1	LED DRIVE	
		TRANSISTOR(S)	
Q201, 202	2SD1450RTA	TRANSISTOR	
Q203	UN4115	TRANSISTOR	
Q351	2SC3311AIRTA	TRANSISTOR	
Q352	KSD471ACYGTA	TRANSISTOR	⚠
Q353, 354	2SC3311AIRTA	TRANSISTOR	
Q361	KSD471ACYGTA	TRANSISTOR	⚠
Q362	2SC3327-A	TRANSISTOR	⚠
Q371	2SC3311AIRTA	TRANSISTOR	
Q501	2SA992EFTA	TRANSISTOR	
Q551	2SC3311AIRTA	TRANSISTOR	
Q553, 554	2SD1450RTA	TRANSISTOR	
Q555	UN4115	TRANSISTOR	
Q571, 572	2SC3311AIRTA	TRANSISTOR	
Q573	2SA1309AIQTA	TRANSISTOR	
Q601-603	2SC3312RSTA	TRANSISTOR	
Q605	2SC3312RSTA	TRANSISTOR	
Q651, 652	2SD2144S	TRANSISTOR	
Q701	2SD2374PQAU	TRANSISTOR	⚠
Q702	2SB1548PQAU	TRANSISTOR	⚠
Q703	2SC3940AQSTA	TRANSISTOR	⚠
Q704	2SC3112TA	TRANSISTOR	
Q751, 752	2SC3940ASTA	TRANSISTOR	⚠
Q753	UN4111	TRANSISTOR	
Q754, 755	2SC3940ASTA	TRANSISTOR	⚠
Q803	UN4115	TRANSISTOR	
Q805	2SC3312RSTA	TRANSISTOR	
		DIODE(S)	
D351	MA165	DIODE	
D352	MA4068M	DIODE	⚠
D361	MA4091-M	DIODE	⚠
D362	MA165	DIODE	
D371	MA165	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D551	MA165	DIODE	
D701-704	1N5402BF	DIODE	⚠
D705, 706	RL1N4003N02	DIODE	⚠
D711	MA165	DIODE	
D712	MA4240H	DIODE	
D714	MA4062-H	DIODE	⚠
D715, 716	MA4150M	DIODE	⚠
D751-754	RL1N4003N02	DIODE	⚠
D755	MA4082LTA	DIODE	⚠
D756	MA165	DIODE	
D757	MA4240H	DIODE	
D801	MA165	DIODE	
D802	MA4100MTA	DIODE	⚠
D803-806	MA165	DIODE	
D807	MA4100MTA	DIODE	⚠
D808-811	SLR-305VC	L. E. D.	
D813, 814	MA165	DIODE	
D817	MA165	DIODE	
D851, 852	MA165	DIODE	
D861, 862	MA165	DIODE	
		VARIABLE RESISTOR(S)	
VR601	EVJYV1F03G24	TREBLE	
VR602	EVJYV1F03G24	BASS	
VR603	EVJY91F03C24	S. BASS	
VR808, 809	EVNDXAA00B23	OUTPUT POWER METER	
		THERMISTOR(S)	
TH801, 802	ERTD2ZHL104T	THERMISTOR	
		COIL(S)	
L501, 502	SLQY07G-40	COIL	
L551, 552	ELEY1R0KA	COIL	
L701	RLQZ271M	COIL	(EG)⚠
		TRANSFORMER(S)	
PT701	RTP1N5B019-W	POWER TRANSFORMER	⚠
		LAMP(S)	
PL801-806	XAMR131	LAMP	
		FUSE(S)	
F1	XBA2C16TB0	FUSE, 250V T1. 6A	⚠
F701, 702	XBA2C16TB0	FUSE, 250V T1. 6A	⚠
		SWITCH(ES)	

Ref. No.	Part No.	Part Name & Description	Remarks
S801	EVQ21405R	POWER	
S802	EVQ21405R	ON/OFF	
S803	EVQ21405R	MODE	
S804	EVQ21405R	DELAY TIME	
S805	EVQ21405R	TEST	
		RELAY(S)	
RL701	RSY0013M-0	RELAY	⚠
RL703	RSY0011-0		⚠
		CONNECTOR(S) AND SOCKET(S)	
CN501-1-3	RJS1A6604	CONNECTOR(4P)	
CN502-1, 2	RJS1A6605	CONNECTOR(5P)	
CN601	RJU057W004	SOCKET(4P)	
CN701-713	RJS1A1101T1	SOCKET(1P)	
CN703-1, 2	RJS1A6604	CONNECTOR(4P)	
CN715	RJU057W004	SOCKET(4P)	
CN801	RJU057W004	SOCKET(4P)	
CP601	RJT057W004-1	CONNECTOR(4P)	
CP715	RJT057W004-1	CONNECTOR(4P)	
CP801	RJT057W004-1	CONNECTOR(4P)	
		JACK(S)	
JK201	RJT065K20	CONNECTOR(20P)	
JK301	RJJ67TA02	HEADPHONES JACK	
JK351	SJT3213	CONNECTOR(2P)	
JK501	RJR0054	SPEAKER TERMINAL(MAIN)	
JK502	RJH2301MS	SPEAKER TERMINAL(SURROUND)	
JK701	SJS9236	AC INLET	⚠
		EARTH TERMINAL(S)	
E501	SNE1004-2	GND PLATE	
E701	SNE1004-2	GND PLATE	
		FUSE HOLDER(S)	
FC1-6	EYF52BC	FUSE HOLDER	

■ RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R159	ERDS2TJ100	1/4W 10
R217, 218	ERDS2TJ102	1/4W 1K
R223, 224	ERDS2TJ472	1/4W 4.7K
R253, 254	ERDS2EJ121	1/4W 120
R255	ERDS2TJ154	1/4W 150K
R256	ERDS2TJ105T	1/4W 1M
R259	ERDS2TJ561	1/4W 560
R291, 292	ERDS2TJ563	1/4W 56K
R301, 302	ERDS2TJ223	1/4W 22K
R303, 304	ERDS2TJ333	1/4W 33K
R305, 306	ERDS2TJ223	1/4W 22K
R307, 308	ERDS2TJ102	1/4W 1K
R309-312	ERDS2EJ121	1/4W 120
R351	ERDS2TJ183T	1/4W 18K
R352	ERDS2TJ473	1/4W 47K
R353	ERDS2TJ183T	1/4W 18K
R354	ERDS2TJ104	1/4W 100K
R355	ERDS2TJ103	1/4W 10K
R356	ERDS2TJ332	1/4W 3.3K
R357	ERDS1FVJ100T	1/2W 10 ⚠
R358	ERDS1FVJ220T	1/2W 22 ⚠
R359	ERDS2TJ273	1/4W 27K
R360	ERDS2TJ222	1/4W 2.2K
R361	ERDS2TJ474	1/4W 470K
R362	ERDS2TJ102	1/4W 1K
R363, 364	ERDS2TJ472	1/4W 4.7K
R371, 372	ERDS2TJ273	1/4W 27K
R373	ERDS2TJ222	1/4W 2.2K
R374	ERDS2TJ273	1/4W 27K
R375	ERDS2TJ822	1/4W 8.2K
R391	ERDS2TJ393	1/4W 39K
R501, 502	ERDS2TJ102	1/4W 1K
R503-506	ERDS2TJ563	1/4W 56K
R509, 510	ERDS2TJ182	1/4W 1.8K
R511	ERDS2TJ334	1/4W 330K
R512	ERDS2TJ154	1/4W 150K
R513	ERDS2TJ684	1/4W 680K
R514	ERD25FJ470	1/4W 47 ⚠
R515, 516	ERDS1FVJ100T	1/2W 10 ⚠
R517, 518	ERD25FVJ100T	1/4W 10 ⚠
R523	ERDS2TJ223	1/4W 22K
R524	ERDS2TJ103	1/4W 10K
R525	ERDS2TJ223	1/4W 22K
R550	ERDS2TJ222	1/4W 2.2K
R551, 552	ERDS2TJ183T	1/4W 18K
R553, 554	ERDS2TJ332	1/4W 3.3K
R555, 556	ERDS2TJ102	1/4W 1K
R557, 558	ERDS1FVJ4R7T	1/2W 4.7 ⚠
R559	ERDS2TJ271	1/4W 270
R560	ERDS2TJ393	1/4W 39K
R561	ERDS2TJ223	1/4W 22K
R563, 564	ERDS2EJ121	1/4W 120
R571	ERDS2TJ823T	1/4W 82K
R572	ERDS2TJ124T	1/4W 120K
R573	ERDS2TJ563	1/4W 56K
R574	ERDS2TJ564	1/4W 560K
R575	ERDS2TJ223	1/4W 22K
R591-593	ERDS2TJ104	1/4W 100K
R595, 596	ERDS2TJ102	1/4W 1K
R598	ERDS2TJ561	1/4W 560
R599	ERDS2TJ105T	1/4W 1M
R601, 602	ERDS2TJ682T	1/4W 6.8K
R603, 604	ERDS2TJ333	1/4W 33K
R605, 606	ERDS2TJ123	1/4W 12K
R607, 608	ERDS2TJ472	1/4W 4.7K
R609, 610	ERDS2TJ332	1/4W 3.3K
R611, 612	ERDS2TJ122	1/4W 1.2K
R613, 614	ERDS2TJ683	1/4W 68K
R615, 616	ERDS2TJ123	1/4W 12K
R617, 618	ERDS2TJ562	1/4W 5.6K
R619, 620	ERDS2TJ681	1/4W 680
R621, 622	ERDS2TJ563	1/4W 56K
R623, 624	ERDS2TJ123	1/4W 12K
R631-634	ERDS2TJ224T	1/4W 220K
R651, 652	ERDS2TJ561	1/4W 560
R653, 654	ERDS2EJ121	1/4W 120
R655	ERDS2TJ561	1/4W 560
R701	ERQ16NKW2R2E	1/6W 2.2 ⚠
R702	ERD2FCVJ4R7T	1/4W 4.7 ⚠
R703, 704	ERDS2TJ562	1/4W 5.6K
R705, 706	ERG1SJ471E	1W 470 ⚠
R707	ERDS1FVJ820T	1/2W 82 ⚠
R708	ERDS2TJ472	1/4W 4.7K
R709	ERG1SJ391E	1W 390 ⚠
R711	ERG1SJ331E	1W 330 ⚠
R716	ERDS2TJ393	1/4W 39K
R717	ERDS2TJ473	1/4W 47K
R721, 722	ERG1SJ271E	1W 270
R761-764	ERDS2TJ1R0	1/4W 1.0
R765	ERDS2TJ102	1/4W 1K
R766	ERDS2TJ223	1/4W 22K
R780	ERDS2TJ822	1/4W 8.2K
R801, 802	ERDS2TJ272T	1/4W 2.7K
R803, 804	ERDS2TJ104	1/4W 100K
R805, 806	ERDS2TJ155	1/4W 1.5M
R807, 808	ERDS2TJ222	1/4W 2.2K
R809, 810	ERDS2TJ103	1/4W 10K
R811, 812	ERDS2TJ821	1/4W 820
R815	ERDS2TJ103	1/4W 10K
R816	ERDS2TJ104	1/4W 100K
R817, 818	ERDS2TJ221	1/4W 220
R819	ERDS2TJ104	1/4W 100K
R820	ERDS2TJ102	1/4W 1K
R821, 822	ERDS2TJ123	1/4W 12K
R823, 824	ERDS2TJ154	1/4W 150K
R825, 826	ERDS2TJ223	1/4W 22K
R827, 828	ERDS2TJ102	1/4W 1K
R829	ERDS2TJ471	1/4W 470
R830-832	ERDS2TJ331	1/4W 330
R833, 834	ERDS2TJ471	1/4W 470
R836, 837	ERDS2TJ222	1/4W 2.2K
R838	ERDS2TJ821	1/4W 820
R839	ERDS2TJ102	1/4W 1K
R840	ERDS2TJ122	1/4W 1.2K
R841	ERDS2TJ152	1/4W 1.5K
R845, 846	ERDS2TJ103	1/4W 10K
R851	ERDS2TJ221	1/4W 220
R852	ERDS2TJ103	1/4W 10K
R853-855	ERDS2TJ222	1/4W 2.2K
R861, 862	ERDS2EJ121	1/4W 120
R863	ERDS2TJ222	1/4W 2.2K
R864, 865	ERDS2TJ221	1/4W 220
R871, 872	ERDS2TJ392T	1/4W 3.9K
		CAPACITORS
C251	ECEA0JKA221B	6.3V 220U
C301, 302	ECEA1HKA3R3B	50V 3.3U
C303, 304	ECBT1H150J5	50V 15P
C305, 306	ECBT1H330J5	50V 33P
C307, 308	ECEA1CKA220B	16V 22U
C353	ECEA1HKA2R2B	50V 2.2U
C361	ECEA1CKA101B	16V 100U
C362	ECEA1CKA100B	16V 10U
C371	RCE0JKA221BV	6.3V 220U
C372	ECBT1E223ZF	25V 0.022U
C373	ECBT1H104ZF5	50V 0.1U
C381, 382	ECBT1E103ZF	25V 0.01U
C397, 398	ECBT1E103ZF	25V 0.01U
C501, 502	ECA1HAP3R3B	50V 3.3U
C503, 504	ECBT1H151KB5	50V 150P
C505, 506	ECBT1H150J5	50V 15P
C509, 510	ECA1HAP220B	50V 22U
C511, 512	ECBT1H821KB5	50V 820P

Ref. No.	Part No.	Values & Remarks
C513	ECA1HM470B	50V 47U
C514	ECA2AAP100B	100V 10U
C515, 516	ECBT1H104ZF5	50V 0.1U
C550	RCE0JKA221BV	6.3V 220U
C551, 552	ECBT1H102KB5	50V 1000P
C553, 554	ECEA1HKA3R3B	50V 3.3U
C555, 556	ECEA1HKA220B	50V 22U
C557, 558	ECA1VM471B	35V 470U
C559, 560	ECQV1H473JM3	50V 0.047U
C561	RCE1EM221BV	25V 220U
C562	ECEA1HKN010B	50V 1U
C563	ECQV1H104JM3	50V 0.1U
C565, 566	ECBT1H101KB5	50V 100P
C571	ECEA0JKA101B	6.3V 100U
C572	ECBT1E223ZF	25V 0.022U
C599	ECBT1C103MS5	16V 0.01U
C601, 602	ECEA1HKA3R3B	50V 3.3U
C603-606	ECBT1H101KB5	50V 100P
C607, 608	ECBT1H151KB5	50V 150P
C609, 610	ECBT1E103ZF	25V 0.01U

Ref. No.	Part No.	Values & Remarks
C611-614	ECEA1HKA3R3B	50V 3.3U
C615, 616	ECEA1HKA010B	50V 1U
C617, 618	ECQV1H124JM3	50V 0.12U
C619, 620	ECEA1HKA010B	50V 1U
C621, 622	ECQV1H334JM3	50V 0.33U
C631, 632	ECEA1HKA3R3B	50V 3.3U
C633, 634	ECQB1H272JF3	50V 2700P
C653	ECEA1CKA101B	16V 100U
C701, 702	ECES1H822VNG	50V 8200U ⚠
C703, 704	ECEA1CKA330B	16V 33U
C705, 706	ECBT1H104ZF5	50V 0.1U
C707	ECA1HM471B	50V 470U ⚠
C708	ECEA1CKA100B	16V 10U
C709, 710	ECBT1E103ZF	25V 0.01U
C711	ECQE1104KF3	100V 0.1U
C712	ECBT1E223ZF	25V 0.022U
C714	ECKR1H103ZF5	50V 0.01U
C731, 732	ECKR1H103ZF5	50V 0.01U
C751	ECKWNS103ZVS	400V 0.01U
C761	ECA1EM102B	25V 1000U

Ref. No.	Part No.	Values & Remarks
C762	ECBT1E103ZF	25V 0.01U
C799	ECBT1H104ZF5	50V 0.1U
C801, 802	ECEA1EKN3R3B	25V 3.3U
C803, 804	ECEA1HKA2R2B	50V 2.2U
C805	ECEA1HKA4R7B	50V 4.7U
C806	ECEA0JKA221B	6.3V 220U
C807	ECBT1H104ZF5	50V 0.1U
C808, 809	ECBT1E223ZF	25V 0.022U
C810	ECEA1HKA4R7B	50V 4.7U
C811	ECBT1H220J5	50V 22P
C812	ECBT1H151KB5	50V 150P
C851, 852	ECEA1HKA3R3B	50V 3.3U
C855, 856	ECBT1C682KR5	16V 6800P
C857	ECBT1E103ZF	25V 0.01U
C905, 906	ECBT1H101KB5	50V 100P
C1101, 1102	ECBT1E223ZF	25V 0.022U
C1103-1106	ECBT1H102KB5	50V 1000P
C1107, 1108	ECBT1E223ZF	25V 0.022U
C1109-1111	ECBT1H102KB5	50V 1000P

■ REPLACEMENT PARTS LIST

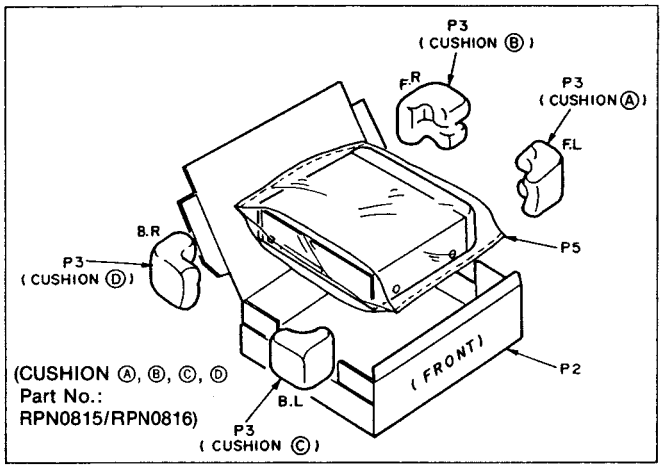
Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*Remote Control Ass'y: Supply period for three years from termination of production.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG2130-1	PACKING CASE (SYSTEM)	(E, EG)
P1	RPG2144	PACKING CASE (SYSTEM)	(EB)
P2	RPG2230	PACKING CASE (AMPLIFIER)	
P2	RPG2231	PACKING CASE (DECK)	
P2	RPG2232	PACKING CASE (TUNER/CD)	
P3	RPN0814	CUSHION (AMPLIFIER)	
P3	RPN0815	CUSHION (DECK)	
P3	RPN0816	CUSHION (TUNER/CD)	
P4	RPQ0458	SPACER	
P5	SPP740	PROTECTION BAG (UNIT)	
P6	RPQF0047	ACCESSORIES BOX	
P7	XZB25X34C03Y	3PROTECTION BAG (F. B., ACC.)	
		ACCESSORIES	

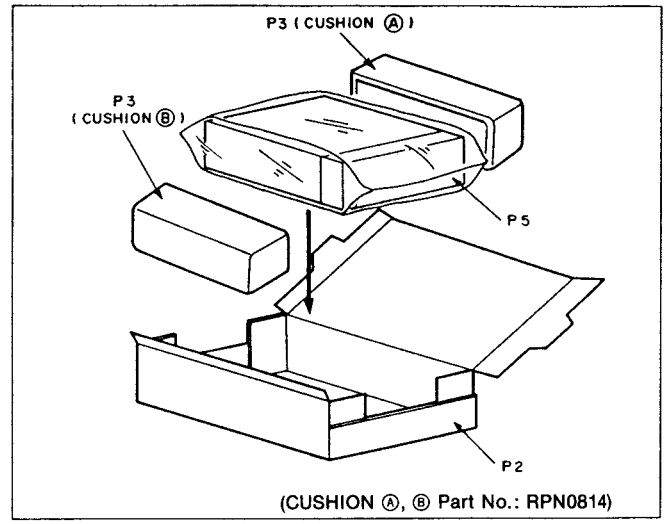
Ref. No.	Part No.	Part Name & Description	Remarks
A1	RAK-CH729WH	REMOTE CONTROL TRANSMITTER	
A1-1	RKK0020-K	BATTERY COVER	
A2	REE0393	SPEAKER CORD	
A3	REX0511	FLAT CABLE (LONG) (15P)	
A4	REX0608	FLAT CABLE (SHORT) (20P)	
A5	RJA0019-2A	AC POWER SUPPLY CORD	(E, EG) ⚠ (SF)
A5	VJA0733	AC POWER SUPPLY CORD	(EB) ⚠ (SF)
A6	RFKSECA1060E	INSTRUCTION MANUAL ASS'Y	(E)
A6	RFKSCA1060EB	INSTRUCTION MANUAL ASS'Y	(EB)
A6	RQT2554-2E	INSTRUCTION MANUAL	(EG)
A7	RQA0013	WARRANTY CARD	
A8	RQCB0169	SERVICENTER LIST	
A9	RSA0007	FM INDOOR ANTENNA	
A10	RSA0012	AM LOOP ANTENNA	
A10-1	RMN0244	ANTENNA HOLDER	
A10-2	XTN3+12AFZ	SCREW	
A11	SJP9009	ATTACHMENT PLUG	(EB) ⚠
A12	RJL1P005B99	SURROUND SPEAKER CABLE	

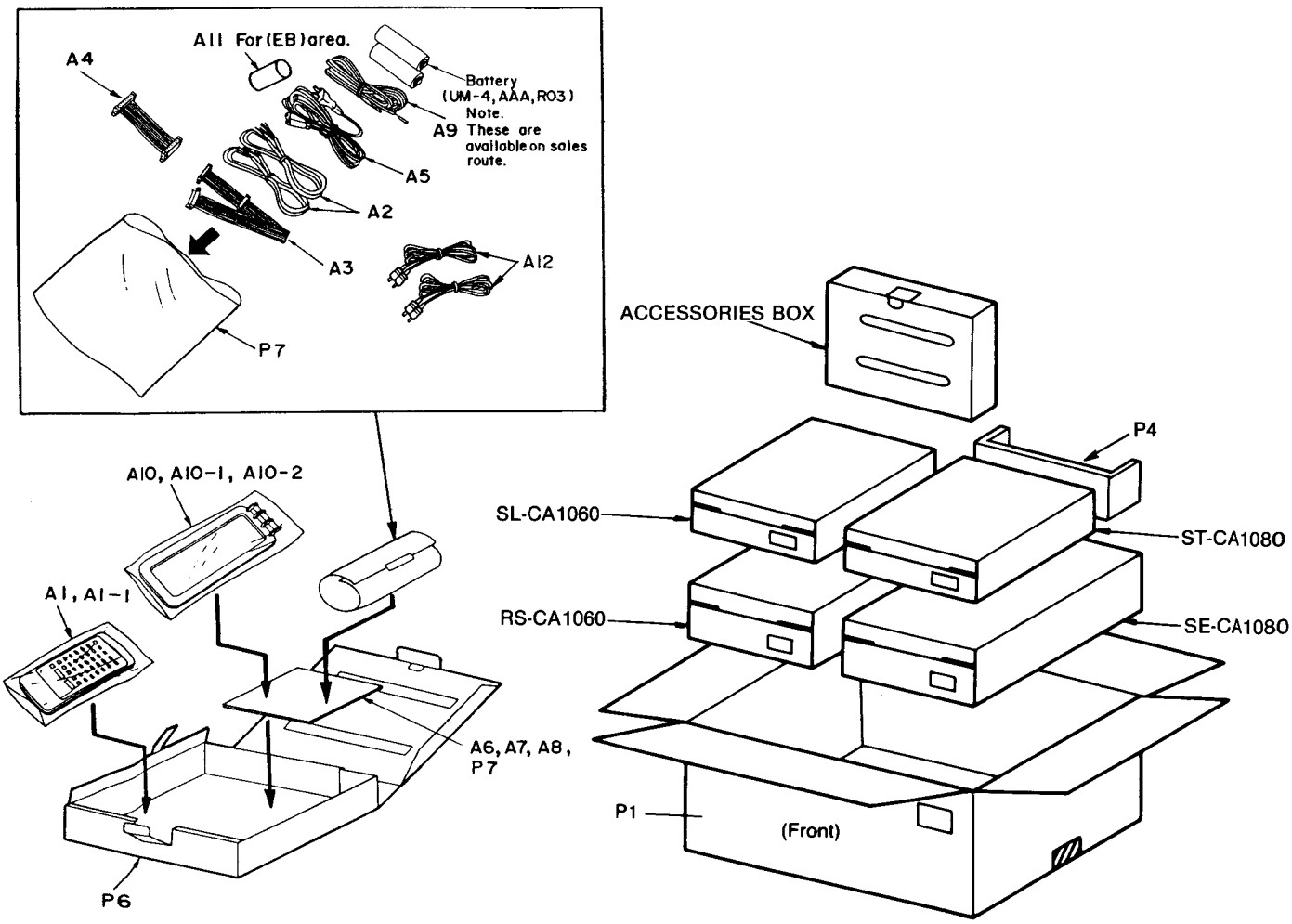
■ PACKAGING

- **ST-CA1080: Stereo Tuner**
  SL-CA1060: Compact Disc Player
  RS-CA1060: Cassette Deck



- **SE-CA1080: Stereo Amplifier**





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